

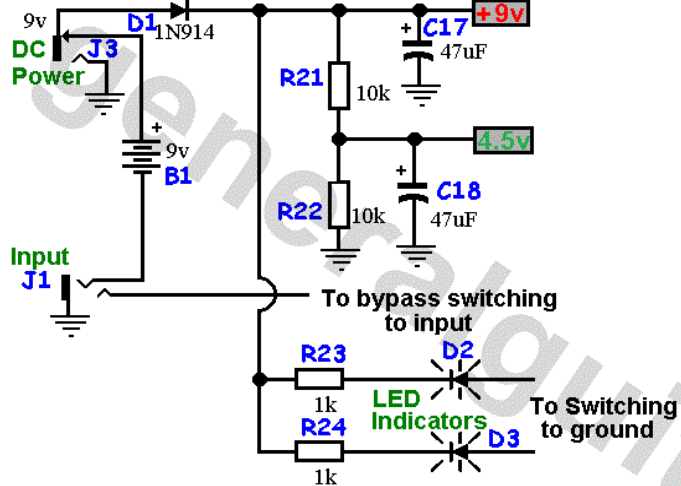
# Dual Boost PCB Example Schematics

Version 2019 August 25

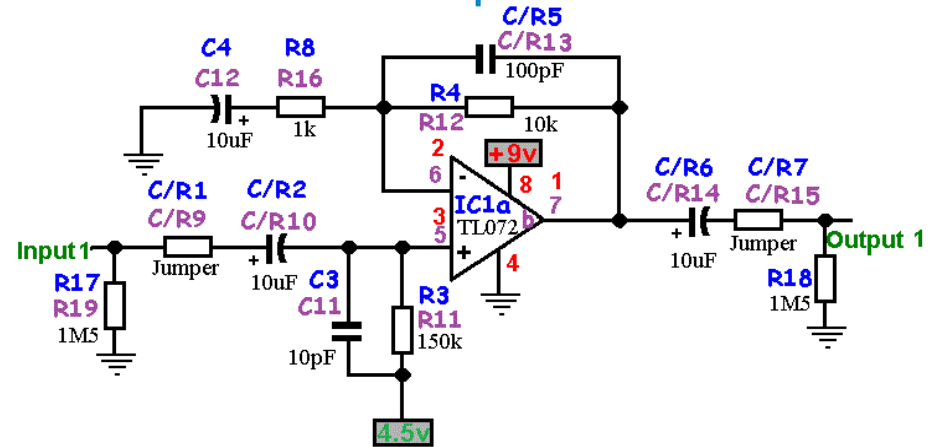
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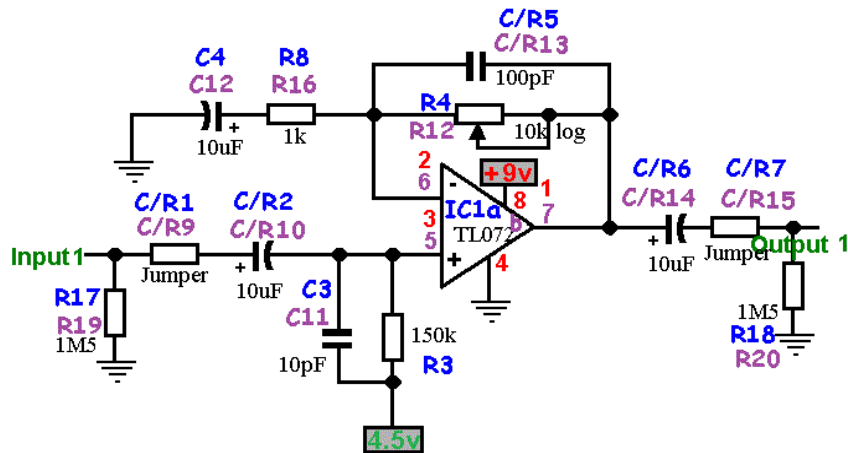
## (Common to all Examples)



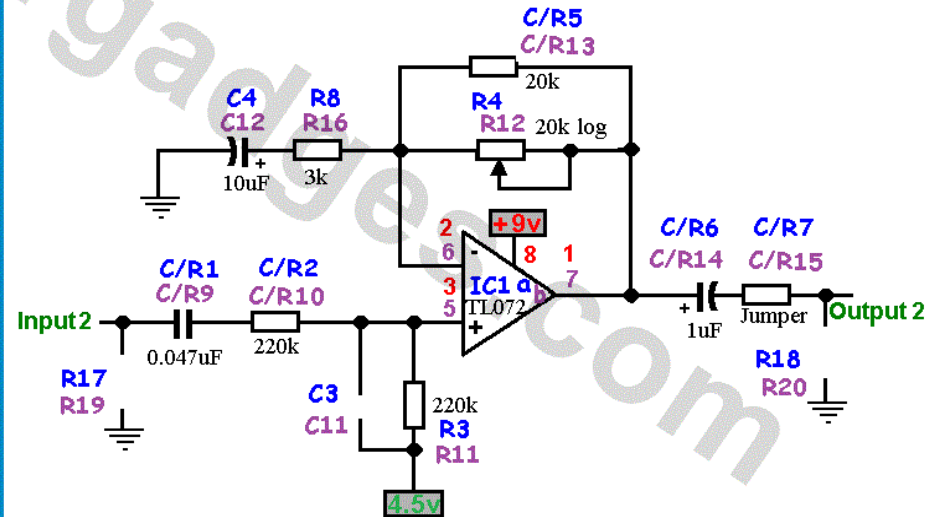
## Example 1



## Example 2



## Example 3





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These are some of some of the booster variations that can be built on the GGG Dual Boost PCB. The "C/R" designations are places where either a capacitor or Resistor can reside. We've tried to make it simple by keeping the same designation number whether it is a capacitor or resistor. In the case of the input/output, one would be the resistor and the other capacitor, but it gives you the option of whether you want the capacitor to come before or after the resistor.

The "**Common to all Examples**" shows the power and LED hookup which is always the same no matter how you are building up the PCB. Bypass switching has been omitted from these schematics since these boosters could be used in such a wide variety of applications that it would not be possible to show them all (some are on the site in the Boosters and also in the Routers Projects categories). There are two hookups for LEDs that have current limiting resistors if you need LED indicators for what you are building.

Examples 1, 2 & 3 can be built in either position 1 or position 2 on the PCB, the diagrams have part and pin numbering for either position. It should also be noted that C3 and C11 are optional capacitors. These are most likely not needed with the TL072 IC. If you are concerned about RF interference they can be used with value up to 220pF (according to Boscorelli).

The resistors shown on the input and output (R1, R7 or R9, R15) are not always necessary (can be jumpered) for stand alone boost stages, but will be useful for for some designs. The pull-down resistors (R17, R18, R19, R20) are also optional, to help prevent possible bypass switch popping.

**Example 1:** Shows a typical preamp stage that can be used for all kinds of applications. The gain is set by the values of R4 and R8, in this example, a gain of 10. This is the preamp used widely in the Nicolas Boscorelli Stompbox Cookbook. It should be noted, however, that most projects in his book are bipolar power supplied, and this circuit runs on a single supply 9 volts

**Example 2:** Shows the same preamp stage as Example 1 but with a "Gain" control potentiometer from 0 (no volume) to a maximum of a gain of 10.

**Example 3:** Shows a preamp/boost stage with a maximum gain control of about 3. This is the exact preamp stage used in the Ibanez LS10 stompbox (except original opamp was a SIP M5218L). This gives a more limited range of volume control and is approximately unity gain at midpoint of the potentiometer. This example should give you some ideas of what you can do by putting a resistor in C/R5 or C/R13 (parallel resistors with R4 or R12).